

COMMERCIAL AIRLIFT AUGMENTATION: AN ORGANIZATIONAL STUDY

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Abstract

The Defense Transportation System (DTS) relies heavily upon the commercial air transportation industry to meet transportation requirements beyond the Department of Defense's (DOD) organic airlift capability. The Civil Reserve Air Fleet (CRAF) is an integral part of the DTS that provides a strategic alliance between DOD and commercial air carriers. This alliance requires a deep level of commitment by the DOD and their commercial air carrier partners to make the contractual arrangements a success and to ensure the functionality of commercial airlift augmentation during times of national need.

This research project explores the corporate structure involved in DOD's management of the commercial airlift augmentation program and outlines each organization's role and responsibilities. While making no overall recommendations regarding the management of the commercial airlift augmentation program, this paper provides a tool to increase the awareness of personnel involved in the mobility arena regarding DOD's use of commercial airlift during both wartime and peacetime and constructs a framework for logistics personnel to build upon for future airlift discussions. Particularly, this paper is geared toward military logistics professionals who need to better understand the integration of commercial airlift into the DTS.

COMMERCIAL AIRLIFT AUGMENTATION: AN ORGANIZATIONAL STUDY

I. Introduction

Background.

The Defense Transportation System (DTS) relies heavily upon the commercial air transportation industry to meet transportation requirements beyond the Department of Defense's (DOD) organic airlift capability. The Civil Reserve Air Fleet (CRAF) is an integral program of the DTS that provides a strategic alliance between DOD and commercial air carriers. In return for peacetime business, the carriers contractually pledge aircraft to support national defense requirements and augment the military's organic capability (1:1).

The CRAF is critical to DOD's mobilization capability. When completely mobilized, the CRAF can compose over one-third of DOD's cargo lift and over 90 percent of DOD's passenger lift (2:14). Equally critical, CRAF carriers provide enormous capability to the DOD during peacetime by supporting everyday passenger and cargo airlift requirements. Mutual cooperation is the key: a deep level of commitment is required by the carriers and DOD to make the contractual arrangements a success and to ensure the carriers' participation during times of national need (3:5).

Problem Statement.

Despite the importance of commercial airlift to DOD's wartime and peacetime capabilities, many DOD personnel only have a limited understanding of the business structure and arrangements within the commercial airlift

augmentation program. It is very easy to consolidate all commercial airlift augmentation under the single label of "CRAF" without fully understanding what that definition entails; although many DOD personnel involved with the logistics functions of their particular Service are aware of the CRAF, they have little or no understanding of how the government actually manages the CRAF.

Personnel involved within the military's logistics system must be familiar with and understand how the commercial airlift augmentation program works. Airlift is a vital part of the military's ability to mobilize and deploy. Today, all Services are dependent upon the airlift wings of Air Mobility Command (AMC) to get their personnel and equipment to the right place, at the right time. Without airlift, DOD loses the rapid deployment capability that is a cornerstone of current military doctrine. Failure to understand how commercial airlift fits into the overall airlift system will likely result in a less than optimal mobilization effort in time of need.

Unfortunately, in terms of how commercial airlift augmentation is managed, DOD does not have a single document that offers a comprehensive overview of roles and responsibilities for involved organizations. One can find bits and pieces of information by scouring DOD directives and instructions (such as DODD 4500.53 and AMCI 24-201) and organizational websites, but no single document offers an all-encompassing view of the program.

Research Objectives.

This research project attempts to fill the current information gap by exploring the corporate structure involved in the management of the commercial airlift augmentation program and by outlining each organization's role and responsibilities. This paper provides a tool to increase the awareness of personnel involved in the mobility arena regarding DOD's use of commercial airlift and constructs a framework for logistics personnel to build upon for future airlift discussions. Particularly, this paper is geared toward military logistics professionals who need to better understand the integration of commercial airlift into the DTS. This paper provides a basic primer for air mobility professionals to use in conjunction with Joint training and education courses. Finally, this product offers information and insight for commercial air carriers and contractors who want to better understand how DOD manages the CRAF and the commercial airlift augmentation program.

Research Question.

How does DOD manage the commercial airlift augmentation program?

Investigative Questions.

The following investigative questions were used to help provide answers for the basic research question:

Investigative Question 1. Why is commercial airlift important to DOD?

Investigative Question 2. How is the DTS organized?

Investigative Question 3. What governs the corporate relationship between military and commercial airlift?

Investigative Question 4. How does the CRAF program work?

Investigative Question 5. What organizations manage DOD's commercial airlift augmentation program?

Methodology.

Exploratory research was conducted using qualitative research methods to capture and define the process of how the government manages DOD's commercial airlift augmentation program. These methods included a review of published doctrine, literature, and historical documents that were augmented by interviews and observations of government and carrier personnel at various management levels. Specifically, personal interviews and discussions were conducted with several divisions of AMC's Directorate of Operations, including the DOD Air Carrier Survey and Analysis Office (HQ AMC/DOB), Civil Air Division (HQ AMC/DOF), and the Contract Airlift Division (HQ AMC/DOY). Further interviews were conducted with HQ AMC/DOY's field support agency at Travis AFB, CA; OL-F AMCAOS. Interviews were also conducted with senior managers of a commercial carrier involved in DOD's commercial airlift augmentation program. These interviews helped better define the roles and responsibilities for each of the organizations involved in DOD's management of the commercial airlift augmentation program.

A literature review was also conducted to review previously documented findings and opinions regarding DOD's use of commercial airlift and the CRAF. Primarily, research focused upon theses, dissertations, and papers accomplished in formal military academic settings, along with a mixture of DOD instructions,

directives, and other publications. Although much research has been conducted on various aspects of the CRAF and DOD's use of commercial airlift during Operation Desert Shield and Desert Storm, these documents contain minimal policy and organizational information. However, the research documents did provide background and reference information to enable the researcher to track down the appropriate agencies involved in the management process.

Chapter 1 of this document serves as an overview of and justification for the research topic. This chapter also includes a definition of the research question and a summary of the research methodology used. Chapter 2 focuses on the organizational structure of the DTS as a whole. Without understanding the basic structure of the DTS and how commercial airlift fits into that overall structure, personnel cannot fully understand the organizational structure of the commercial airlift augmentation program. Chapter 3 specifically focuses upon airlift policies and business relationships. This chapter should help personnel better understand the relationship between military and commercial airlift. Chapter 4 highlights the major working aspects of the CRAF program. This chapter also briefly touches on the historical relevance of the CRAF in its first, and only, activation during the Persian Gulf War. Chapter 5 specifically examines the various DOD organizations involved in the management of the commercial airlift augmentation program. This chapter explains “who does what” within DOD to make the commercial airlift augmentation program a success. Specifically, this chapter focuses on the roles and responsibilities of the various offices involved in the program. The primary goal of this chapter is to provide

individuals with sufficient information to be able to understand *who* makes the commercial airlift augmentation program work and to point personnel in the right direction for specific information or assistance from appropriate agencies, as required. Finally, Chapter 6 offers an overview of the entire paper. This chapter offers a concise description of DOD's commercial airlift augmentation management program and serves as an executive summary.

II. Defense Transportation System Overview

One must first have a basic understanding of the DTS to fully understand how commercial airlift augmentation fits into the overall DOD organizational structure. To that end, this chapter focuses upon the organizational structure of the DTS with a basic overview of each individual organization's role and responsibilities.

The DTS.

Strategic Mobility. Strategic Mobility has been defined as "the capability to deploy and sustain military forces worldwide in support of national strategy" (4:GL-9). Although this definition is short, these few words represent a myriad of logistical networks, organizations, and personnel required to make such a capability possible. DOD's mobility machine is a complex integrated system that enables the right equipment and personnel to be at the right place at the right time during periods of need. This capability transports people and equipment to any point upon the globe, so they can perform their mission. This mission could be in response to a natural disaster, or a civil emergency, or the mission could be in quick response to an aggressive nation's military actions where military force is rapidly projected to counter or deter further escalation of conflict. This strategic mobility is a national resource, which is unmatched by any other nation in the world.

A primary mobility enabler is the DTS, which is the transportation infrastructure that supports the DOD. The DTS is critical to the support of our

National Military Strategy (5:4). DOD personnel must have a full awareness of the organizational structure of the DTS in order to fully utilize and improve the mobility and commercial airlift augmentation capabilities of the DOD. As simple as the description of the DTS looks on paper, in reality it is a very large organizational structure accomplishing a very complex task.

Some things look complex but are actually quite simple. Some things look simple but are actually very complex. But Global Transportation in Peace and War is not misleading. It sounds complex and it is, indeed, an intricate and challenging mission. On any given day, the United States Transportation Command (USTRANSCOM) has air, land and sea operations underway in support of U.S. military geographic commanders in chief (CINCs) around the globe (6:5).

The Commander in Chief of the United States Transportation Command (USCINCTRANS), General Charles T. Robertson, Jr., is currently the single manager for defense transportation. Under his combatant command and control, three Transportation Component Commands form the execution backbone of the DTS. The three Transportation Component Commands within the United States Transportation Command (USTRANSCOM) are the Military Sealift Command (MSC), the Military Traffic Management Command (MTMC), and AMC.

Military Sealift Command. MSC is located in Washington, D.C., and is a major command of the U.S. Navy (USN). MSC is the USN's component command of USTRANSCOM, providing sealift transportation services between seaports of embarkation (SPOEs) and seaports of debarkation (SPODs) worldwide for DOD forces. MSC provides key mobility services by prepositioning combat support afloat, sustaining forward combat presence with logistical

support, and providing key surveillance and scientific support with special mission ships (7).

"During a war, more than 95 percent of all the equipment and supplies needed to sustain U.S. military forces overseas is carried by sea" (8:1). To meet the sealift requirements, MSC stations ships "in strategic areas around the world, close to potential contingency areas" (8:4). As needed, MSC repositions the ships to match up with combat forces and equipment. Prepositioning is a key tenant of MSC's deployment philosophy. Currently, MSC has approximately 35 equipment, supply, munitions, and fuel ships placed at several strategic positions throughout the world to support U.S. Army (USA), U.S. Air Force (USAF), USN, Marine Corps, and Defense Logistics Agency quick response requirements.

In addition to organic sealift, MSC administers a commercial sealift augmentation program very similar to AMC's CRAF program. The Voluntary Intermodal Sealift Agreement (VISA) was "introduced in the mid-1990s to provide joint planning and assured access to commercial shipping at pre-agreed rates during a national emergency" (8:3). Voluntary participants in the VISA receive federal subsidies and peacetime business from the federal government.

Military Traffic Management Command. MTMC is located in Alexandria, VA, and is a major command of the USA. MTMC is the USA's component command of USTRANSCOM, providing ocean terminal, commercial ocean liner service, and traffic management worldwide for DOD forces. MTMC is the "primary link" between DOD customers and commercial trucking, rail, and sealift providers (9). This intermodal transition function is critical to control the

movement of equipment and troops across the various modes of commercial and military transportation.

MTMC maintains a permanent presence in 22 ports around the world, staging, loading, unloading, and documenting nearly \$4 billion worth of cargo movement annually. MTMC tracks the movement of cargo for its customers, providing key intransit visibility for the DOD (9). As part of their maritime partnership with MSC, MTMC also executes the contracts that MSC generates for the VISA program (4:2).

MTMC's most visible mission is unloading and loading the large cargo-bearing ships at seaports around the world. MTMC handles the challenge at small, large, deep or shallow ports. For example, during recent military operations in Kosovo, MTMC ensured the DOD logistics machine was able to get in and out of ports such as Thessaloniki, Greece; Brindisi, Italy; Durres, Albania; and Piraeus, Greece. MTMC enabled the warfighters to get "to the right place at the right time" (10). MTMC relies significantly on establishing and monitoring contracted movements internationally.

Air Mobility Command. AMC is located at Scott Air Force Base (AFB), IL and is a major command of the USAF. AMC is the USAF's component command of USTRANSCOM, providing airlift, air refueling, and aeromedical evacuation services worldwide for DOD forces. AMC moves cargo and passengers onto and off commercial and military aircraft using aerial port squadrons and is traditionally the operator of common-user aerial ports of embarkation (APOEs) and aerial ports of debarkation (APODs). AMC provides these services via 12 AFBs

located throughout the continental U.S., seven military installations in the Pacific theater, and five military installations in the European theater. AMC calls its overseas base structure the “En-Route” system. Additionally, AMC has smaller aerial port operations throughout the world at contractor-operated sites and Small Terminal Assistance Program (STAP) locations at naval bases. Finally, mobile teams deploy to perform command and control, airfield management, aerial port, and maintenance operations at foreign airfields that may be a “bare base” or a fully functional international airport. These operations in aggregate form a significant and robust global mobility capability.

The Tanker Airlift Control Center (TACC) at Headquarters AMC tasks, monitors and controls all operational airlift missions supporting USTRANSCOM. Their responsibilities include "current operations, command and control, logistics operations, aerial port operations, aeromedical evacuation, flight planning, diplomatic clearances, weather, and intelligence" (4:GL-9). This command, control, computer, communication and information (C4I) function reports directly to AMC's commander who is also currently dual hatted as USCINCTrans.

AMC's current organic fleet consists of the C-5, C-17, C-141, C-130, KC-10, KC-135, C-9, and C-21 aircraft. "AMC's fleet of air mobility aircraft are joined by commercial air carriers to deliver cargo and personnel anywhere in the world in a matter of hours" (4:ii). AMC's commercial airlift partners utilize A-300, B-767, B-757, B-747, B-737, B-727, DC-10, DC-9, DC-8, DC-6, L-1011, L-100, MD-80, and MD-11 aircraft.

AMC uses these aircraft in different combinations to meet mission requirements. Such "unique" suites of airlift capability include: Channel, Air Mobility Express (AMX), World Wide Express (WWX), Category A, Patriot Express, General Services Administration (GSA) City Pairs, GSA Domestic Small Package, and Special Assigned Airlift Missions (SAAMs) (4:ii).

Importance of Air Transportation.

"While 90 percent of cargo moves by sea to all major contingencies, the critical 10 percent delivered by air is front-loaded through rapid global air mobility" (11). But, whether by land, sea or air, no single transportation mode is sufficient by itself; the synchronized effort of all modes working together creates the synergy necessary for DOD to mobilize a sustainable force globally. Air transportation does provide, however, that initial insertion of force, which may be enough to deter an aggressor before a conflict escalates to a higher level of intensity.

Air transportation is no less crucial in peacetime, allowing DOD to accomplish its day-to-day mission with smaller supply inventories on hand. DOD's logistics system "is growing increasingly more dependent upon the civil air carriers for successful movement of essential and non-essential products, spare parts, and supplies" (12:29). Commercial airlift is a large part of DOD's every day airlift: AMC awarded \$345 million in pre-planned international commercial airlift contracts in fiscal year 1999; additionally, AMC estimated it would need an additional \$362 million worth of ad hoc international commercial airlift during the same year (13). Simply put, the DTS could not function without having the rapid

capability that air transportation provides, and commercial airlift provides a large and critical part of that capability.

III. The Military and Commercial Airlift Relationship

Introduction.

This chapter focuses upon the underlying business relationships of the commercial airlift augmentation program and should help personnel better understand the importance of commercial airlift to the military. A little historical perspective is given, but the primary focus of this chapter is the current policies and directives governing the current airlift augmentation program.

It is imperative to differentiate between the terms *CRAF* and *commercial airlift augmentation*. Although the two terms are inseparably linked, they should not be used interchangeably--although they often are in conversation. The *CRAF* program is exclusively a contingency arrangement that is a part of DOD's overall *commercial airlift augmentation* program. This more all-encompassing term includes everyday peacetime airlift requirements, in addition to contingency requirements.

Although the *CRAF* program gets the majority of the attention in wartime planning and academic discussions, the peacetime requirements occupy the majority of operational issues and discussions in the commercial airlift arena. As previously discussed, commercial carriers are providing a significant portion of the airlift services for the DTS each and every day. But, it is the *CRAF* program that arguably builds the backbone of the entire commercial airlift augmentation program. With little exception, carriers are not allowed to benefit from participation in DOD's peacetime augmentation program without participating in the *CRAF*.

Historical Foundation. The relationship between military aviation and commercial aviation is well documented. It is no exaggeration to say the two have been "joined at the hip" during the twentieth century. The boom of the commercial air travel industry following the industrial and manufacturing advancements of World War II is certainly a prime example. Despite the connected nature of the two, however, it was the poor coordination and inability to quickly establish necessary contracts to meet the military airlift demands of the Korean War that provided the impetus to formalize the business relationship between DOD and the airline industry (14:4). National mobilization was an important issue at this time in the US due to the recent lessons of World War II and the beginning of the Cold War (15:3). The Defense Production Act of 1950 provided the legal basis and led to executive actions to institutionalize the use of civil airlift resources to meet mobilization requirements (16).

Executive Order 10219.

An Executive Order issued by President Truman in 1951 directed DOD and the Department of Commerce "to develop a plan to use civil assets" (17:3). Executive Order 10219 led to the creation of the CRAF program "to expedite the availability of the civil air carriers to support the military and avoid the mobilization problems of World War II" (18:6). Outlined on 20 March 1952 in *The Department of Defense Plan for the Civil Reserve Air Fleet*, the "formal agreement between the DOD and the airlines concerning use of commercial aircraft during contingencies" was established (19:4-5). The authoring of this document is credited with the creation of the CRAF.

National Airlift Policy.

Following the CRAF's creation, the commercial airlift industry began to use its influence to increase DOD's reliance upon the commercial airlift industry. Stuart G. Tipton, president of the Air Transport Association of America (ATA) argued in front of the House Subcommittee on Military Operations that "the most efficient and effective way to build up the strongest possible total national airlift capability" was for the military transport system to scale back and require DOD to rely on commercial air carriers for non-military unique operations. The committee's recommendations, which "encouraged CRAF carriers to purchase cargo aircraft by giving them a larger share of peacetime business," led to the approved Courses of Action published in President Eisenhower's directed study *The Role of Military Air Transport Service in Peace and War* in 1960. This document would serve as the nation's airlift policy for the next 27 years (20:17-19).

Our current National Airlift Policy was established by President Reagan in National Security Decision Directive Number 280, on 24 June 1987. This directive replaced Eisenhower's Presidentially approved Courses of Action (21). The National Airlift Policy established by President Reagan in 1987 has remained unchanged to this day and is still in effect as national policy.

This policy is extremely important to the balance of power between the military and commercial airlift fleets. In an ideal environment of unrestricted funding and utopian prosperity, DOD would be fully capable of supporting its own peacetime and contingency requirements exclusive of assistance from

commercial air carriers; and commercial carriers would be fully employed by the commercial market itself and would not require additional business from the DOD. In reality, however, DOD cannot afford to buy, operate, and maintain a fleet large enough to satisfy the airlift requirements of a large-scale contingency. Additionally, such a large fleet of self-sufficient organic military capability would also hurt the commercial industry by removing a sizeable portion of demand from the marketplace. Determining the right mix of organic capability and the right amount of reliance upon the commercial sector is an ongoing debate, but the relationship between the two has been strongly established over time (22:19-24).

The National Airlift Policy officially recognizes the strategic importance of airlift to the nation's defense and establishes the national defense airlift objective "to ensure that military and civil airlift resources will be able to meet defense mobilization and deployment requirements in support of US defense and foreign policies" (21). Beyond this contingency requirement, the directive also acknowledged the shortfall of strategic airlift and formulated a policy of reliance upon the commercial sector for airlift support during peacetime and contingency following the directives of nine policy guidelines.

The first guideline states that US policies "shall be designed to strengthen and improve" DOD's organic airlift capability and to "enhance the mobilization base" of the commercial industry (21). This guideline demonstrates the codependence of the military and commercial airlift segments. Improvements in one sector should not be made at the expense of the other; rather, they should exist together in congruence with national interests.

The second guideline provides the basis for DOD to maintain its own resources to meet war, contingency, and emergency requirements. This guideline states that the DOD will establish "minimum utilization rates" to maintain operational proficiency (21). This is followed by the requirements of the third guideline:

The Department of Defense shall determine which airlift requirements must move in military airlift manned and operated by military crews because of special military considerations, security, or because of limiting physical characteristics such as size, density, or dangerous properties; and which airlift requirements can be appropriately fulfilled by commercial air carriers (21).

Very closely related are the mandates of the fourth policy guideline which states "the commercial air carrier industry will be relied upon to provide the airlift capability required beyond that available in the organic military airlift fleet" (21). In short, the first four policy guidelines establish that it is in the nation's best interest to have a minimally sized and operated organic air fleet to meet military-unique requirements, augmented by an equally important commercial air fleet to meet all other requirements.

The fifth guideline states that augmentation for DOD's peacetime airlift requirements "shall be satisfied by the procurement of airlift from commercial air carriers participating in the Civil Reserve Air Fleet program," while going on to specify that DOD "shall establish appropriate levels for peacetime cargo airlift augmentation in order to promote the effectiveness of the Civil Reserve Air Fleet and provide training within the military airlift system" (21). The sixth policy guideline requires "minor surges" in requirements to be satisfied by "increased utilization" of commercial airlift (21).

The remaining three guidelines address the need for cooperation between the US Government and the aviation industry. In addition to the intensive dialogue needed between DOD and the industry, the directive specifically notes the cooperation required between the DOD and the Department of Transportation to "jointly develop policies and programs to increase participation in the Civil Reserve Air Fleet and promote the incorporation of national defense features in commercial aircraft" (21). Other agencies charged with developing policies and regulations to "strengthen the nation's airlift capability" and to "promote the global position of the United States aviation industry" are the Department of State, the Department of Commerce, the Federal Emergency Management Agency, and the National Aeronautics and Space Administration (21).

DOD Transportation Policy.

In 1990, Secretary of Defense Dick Cheney announced a new DOD Transportation Policy "designed to foster a strong national transportation system that is capable of responding to a full spectrum of national defense requirements" (23). This policy was intended to "fill gaps between the National Airlift and Sealift Policies" and reflected DOD's commitment to relying upon commercial transportation "whenever practicable" in order to keep operating costs low (23).

The DOD will foster an economically sound, safe, reliable, and efficient national transportation system and supporting infrastructure by using commercial transportation services and facilities to the greatest extent practicable, consistent with military needs. In peacetime, DOD will maintain and operate only those owned or controlled transportation resources needed to meet approved DOD emergency and wartime requirements that cannot be met by commercial transportation sources (23).

The specific guidelines laid out by this transportation policy also dictated that only carriers providing "quality, safe, secure, and reliable" services would be used by the DOD. Another important aspect of the policy is the extent to which it prescribes the use of commercial transportation assets: "to the greatest extent possible, DOD will adapt national defense plans and programs to transportation civil sector capabilities." Further clarification provides for the "maximum use of commercial intermodal and container transport capabilities in peacetime and wartime to the extent that they meet DOD requirements." Finally, the policy even states the DOD will operate out of commercial facilities as much as possible without affecting wartime operational requirements (23).

Policy Memorandum on Transportation and Traffic Management.

On 16 June 1994, the Deputy Secretary of Defense issued a policy recognizing the critical alliance between DOD and the commercial air carriers and instructed USTRANSCOM to "revitalize the CRAF program" (24). This policy was primarily in response to the dissatisfaction of several major carriers participating in the CRAF program following the activation of the CRAF in the Persian Gulf War.

Additionally, the policy was aimed at ensuring the Services were good stewards in using airlift assets and not making independent travel arrangements with disregard to the effects upon the DTS. For example, based on recurring requirements, AMC contracts a charter flight to go from Los Angeles to Tokyo twice a week. Customers who need to go to Japan from the West Coast but who buy their own ticket, in effect, make the government pay for the same

international ticket twice. The customer pays for a seat on a scheduled service flight, and the seat that has already been paid for by AMC goes empty on the chartered flight. This customer *leakage* plays havoc on the DTS.

The new policy required DOD customers to use the following priorities for passenger and cargo requirements: 1) AMC arranged/operated airlift, 2) General Services Administration (GSA) arranged/contracted airlift on CRAF carriers, 3) other US CRAF carriers, 4) DOD-approved US flag carriers, 5) non-DOD approved US flag carriers, 6) DOD-approved foreign flag carriers, and 7) non-DOD approved carriers. Further, the policy required USTRANSCOM to develop a consolidated plan between AMC and GSA contracted airlift requirements (24). As a result, this policy led to DOD incorporating the GSA City Pair requirements into the CRAF program, as discussed later in this paper.

Transportation Acquisition Policy.

In January 1998, the Under Secretary of Defense for Acquisition and Technology issued policy addressing the importance of acquisition strategy to the overall transportation policy of DOD. As stated in the DOD's transportation policy, commercial transportation resources will be used "to the maximum extent possible," and that leads naturally to the criticality of the acquisition process in carrying out that strategy. The acquisition policy specifically addresses the need for DOD to use "best-value" procedures when acquiring transportation services and specifies that these services "should fulfill customer intermodal movement requirements from origin to destination" but also goes on to set some specific requirements related to commercial airlift augmentation (25).

Primarily, the policy requires the acquisition of all transportation services to include provisions requiring "US Flag commercial entities to commit to support DOD contingency/wartime requirements in DOD readiness programs" as a prerequisite for receiving business from DOD. Specifically, the policy uses the CRAF and VISA programs as examples of DOD readiness programs. Further, the policy states that when contracting with third party logistics agencies, Defense Agencies will include evaluation preferences for "suppliers, third party logistics managers, and integrated logistics managers who commit to use carriers who participate in the DOD CRAF and VISA programs" (25).

DOD Commercial Air Carrier Quality and Safety Review Program.

Title 32 of the Code of Federal Regulations, Part 861, establishes "quality and safety criteria for commercial air carriers providing or seeking to provide airlift services to the DOD." In short, this code requires commercial air carriers doing business with the DOD to provide safe operational and maintenance conditions in compliance with all applicable laws and regulations.

A large portion of the code is spent detailing the requirements to be evaluated by a DOD survey team to establish whether or not a carrier is suitable for DOD use. This team (specifically, HQ AMC/DOB, whose duties and responsibilities are discussed in Chapter 5) uses experienced judgment and on-site operating and maintenance surveys, in addition to other federally required certification criteria and regulatory guidance, to evaluate the following aspects of carrier operations (26):

- Prior Experience
- Air Carrier Management
- Operations
 - Flight Safety
 - Flight Operations
 - Flight Crew Hiring
 - Aircrew Training
 - Captain Upgrade Training
 - Aircrew Scheduling
 - In-Flight Performance
 - Operational Control/Support
 - DOD Charter Procedures
- Maintenance
 - Maintenance Personnel
 - Quality Assurance
 - Maintenance Inspection Activity
 - Maintenance Training
 - Maintenance Control
 - Aircraft Maintenance Program
 - Maintenance Records
 - Aircraft Appearance
 - Fueling and Servicing
 - Maintenance Manuals
 - Maintenance Facilities
- Security
- Specific Equipment

Additionally, Title 32 of the Code of Federal Regulations, Part 861, Section 4, outlines the operating procedures of the Commercial Airlift Review Board (CARB) whose responsibilities and duties are discussed in Chapter 5.

Commercial Passenger Airlift Management and Quality Control.

DOD Directive Number 4500.53, 12 December 2000, establishes DOD's basic guidelines for ensuring the continued safety of commercial airlift used by the DOD for passenger movement. In concurrence with the previously discussed

national and DOD transportation policies, this directive specifically addresses the responsibility of the DOD for ensuring the highest level of safety of its passengers by monitoring factors affecting air passenger safety and quality. The directive designates the Under Secretary of Defense (Acquisition, Technology and Logistics) as the primary agency responsible for managing commercial passenger airlift oversight. These functions are managed through the Office of the Assistant Deputy Under Secretary of Defense (Transportation Policy) (ADUSD(TP)).

The document designates several other responsible authorities as the methods of review, and these offices are listed below (27:6-9). Their individual responsibilities and procedures are discussed in Chapter 5.

- Heads of DoD Components
- Commanders of the Theater Combatant Commands
- DOD Air Carrier Survey and Analysis Office
- DOD Commercial Airlift Review Board (CARB)
- Commander, AMC
- USCINCTrans
- DOD Commercial Airlift Review Authority (CARA)

Transportation and Traffic Management.

DOD Directive Number 4500.9, 26 January 1989, prescribes the general transportation and traffic management policies for DOD. This directive echoes the previously discussed transportation policies, which mandate the use of "safe, secure, reliable, and quality" commercial sources for DOD requirements that are in excess of DOD capacity (28:2). Further, the directive goes on to specify the requirement to develop acceptable standards and objective criteria to determine which carriers are suitable for use by DOD (28:3).

Regarding commercial passenger service, the directive specifies that customers will utilize CRAF carriers "to the extent practical" for the movement of international passengers via AMC-contracted airlift, if not moved via organic airlift (28:6). Specifically, the directive names the Assistant Secretary of Defense (Production and Logistics) as the primary office responsible for ensuring the efficient use of transportation resources, both military and commercial (28:14).

This directive also establishes the Joint Transportation Board, which is the Joint Chiefs of Staff's (JCS) vehicle for determining priorities for transportation resources as required by excess transportation requirements and limited resources (28:14). With regard to the Air Force, DODD 4500.9 also designates AMC as the primary provider of "common-user airlift services and military airlift during peacetime and wartime, periods of emergency and crises, and for JCS exercises" (28:16).

United States International Air Transportation Policy.

In 1995, the Department of Transportation (DOT) issued a Statement of United States International Air Transportation Policy outlining their goal of " safe, affordable, convenient and efficient air service for consumers" (29). This statement recognizes the strong relationship between commercial airlift and the nation's defense. Additionally, the policy advocates the reliance upon the competitive nature of the marketplace to provide better air service to consumers and to meet defense needs (29).

Of particular interest to DOD's airlift augmentation program is the policy's expectation of the continued trend toward international alliances within the air

market. This view, of course, is widely supported; airlines continue to develop international partnerships to help them remain viable in a business environment dominated by international access to trade. This is not without an impact upon DOD, however, since the CRAF is predicated upon the rapid availability and use of US owned and operated aircraft fleets. The policy acknowledges that these international "cooperative arrangements may affect the availability of civil aircraft to meet emergency airlift requirements" and sets an objective of recognizing the importance of civil airlift resources in meeting defense requirements for both mobilization and contingency requirements (29). This policy will no doubt become more scrutinized and important as the market trends toward increased international code-sharing arrangements between US and foreign-controlled airlines (30). The push for allowing increased foreign ownership or control of CRAF committed aircraft will become an increasing area of concern in the near future (31:43). Undoubtedly, foreign ownership will also be an area of contention between DOD and other government policy makers (16).

Defense Transportation Vision for the 21st Century.

The ADUSD(TP) office recently published its vision for defense transportation in the new century. This vision includes an objective of achieving resemblance between peace and war transportation operations for DOD. To achieve this semblance of operations, the vision targets increased levels of cooperation and optimized integration of capabilities between DOD and commercial transportation providers. The vision forecasts a DOD transportation network that is responsive to meet the challenges of the 21st Century through its

continued focus upon contractual arrangements, like the CRAF, for readiness and mobilization preparedness (32). "As the military and industry continue to strive to improve the program, CRAF is more than capable of contributing to [the] increasing demands of our new strategic environment well into the future" (33:ii). The following chapter specifically describes how the CRAF program is designed to meet DOD's needs both today and tomorrow.

IV. The Civil Reserve Air Fleet

Introduction.

Definition of the CRAF. The CRAF program is the national contingency plan established in 1952 that assures an adequate amount of commercial airlift is available to augment military airlift during national emergencies (34:2). Although voluntary in nature, the program consists of contractual agreements between US air carriers and the government. During activation of the CRAF, participating carriers are required to make available their previously identified aircraft, along with the required crews and operational support, for the government's use. Although the CRAF is an emergency plan, the program itself requires substantial administration during peacetime to ensure its wartime virility. As such, the CRAF is very much an active and full-time program, requiring DOD's constant oversight.

Purpose of the CRAF. As discussed in the national policy outline, US policy requires DOD's airlift program to be minimally sized and to rely upon assistance from the commercial sector as much as prudently possible. If the commercial transportation sector can provide the necessary resources to meet military requirements, DOD is required to utilize and "foster the development of military-useful commercial capabilities" (28:2). Now it is one thing to have the industrial capacity of the commercial sector in the nation's *back hip pocket* just in case help is needed, but it is a completely different thing to rely upon commercial capability to fulfill DOD's basic wartime/emergency tasks. The latter is just what our National Airlift Policy requires: the US military is dependent upon the

capability of our nation's commercial air carriers to effectively protect and defend the US.

The CRAF is the vehicle for ensuring commercial augmentation is only a few phone calls and a few hours away from availability. Without commercial augmentation, DOD cannot fulfill its responsibilities during a national airlift emergency. In fact, about 50 percent of USTRANSCOM's total airlift capability during time of war is provided by the CRAF (4:3). "The CRAF currently provides over 90 percent of the total DOD passenger airlift and 20.5 million ton miles per day of DOD's cargo capacity" (35:59). Further, CRAF carriers provide "almost all" of DOD's aeromedical evacuation airlift capability (16).

The Mobility Requirements Study Bottom-Up Review Update and analysis of preposition cargo set the airlift requirement for a two major regional contingencies (MRC) scenario at 49.7 million ton miles per day (MTM/D). Fully mobilized, the Air Reserve Component and active duty contributes approximately 61 percent, while the Civil Reserve Air Fleet (CRAF) provides 39 percent (2).

In accordance with DOD transportation policies, the CRAF program is part of DOD's overall transportation strategy "to procure safe, secure, reliable, and quality commercial transportation services" at an overall low cost to the government (28:2-3). While requiring very little up-front government investment, the CRAF keeps a large amount of airlift capability available and ensures DOD's short-term and long-term requirements are met, playing upon the "interdependence of military and civilian airlift capabilities" (21). The savings to DOD and the government are substantial. "According to a recent RAND study, replacing the CRAF capability with military aircraft would have cost DOD about \$1 billion to \$3 billion annually over the past 30 years" (34:2).

The benefits of the wartime capability of the CRAF are obvious, but no less notable are the benefits of the airlift provided by CRAF carriers within the peacetime transportation system. In fact, it is the peacetime integration of commercial airlift augmentation into the DTS that helps ensure the proficiency and operational readiness of the CRAF within the military airlift system (21). During Fiscal Year 2000, commercial airlift provided airlift valued at \$693 million for chartered passenger and cargo services, \$957 million for scheduled service passenger transportation, and \$134 million for small package services (16).

Contract Structure of the CRAF.

Based on the legal authorities discussed in Chapter 3, AMC establishes contracts with air carriers who wish to participate in the CRAF program. Every five years, a basic memorandum of understanding (MOU) is agreed to between AMC and the carriers, outlining the basic guiding principles of the CRAF program. One specific area addressed by this MOU is the manner in which the rates for services rendered by the carriers are computed and paid by the government. Although AMC computes these rates annually based on accrued operational data from the carriers, the format guiding the process stems from the five-year MOU. These annually determined rates are then used in the contracts agreed to between AMC and participating air carriers each year.

Annually, based on forecasted operational requirements and organic airlift capability, AMC solicits for commercial airlift augmentation. In general, these requirements entail routine, everyday airlift requirements that are able to be clearly defined (e.g., the need to provide airlift for 400 roundtrip seats between

Los Angeles and Yokota Air Base, Japan twice weekly), along with provisions that allow carriers additional business opportunities that are harder to identify ahead of time (e.g., the need to provide airlift for 600 DOD personnel to deploy to the Congo to provide humanitarian flood relief). Carriers are awarded specific routes and frequencies, along with an estimated amount of additional to-be-determined airlift.

Entitlements. During the solicitation process for these annual contracts, carriers submit to AMC the specific aircraft they are willing to offer in support of the CRAF program. Based on the number and capabilities of the aircraft they are pledging to the CRAF, AMC then calculates an *entitlement* for each of the carriers using the Mobilization Value (MV) point system (36:13-14). This system determines the comparative value of aircraft committed to the CRAF from carrier to carrier. This comparative value is then translated into a fair share allocation of peacetime airlift augmentation business to each of the carriers. Simply put, if Carrier 1 commits more airlift capability to the CRAF than Carrier 2, AMC will offer more peacetime business opportunities to Carrier 1 than Carrier 2, all other things being equal. These entitlements are reflected in the annual contracts between AMC and the various participating carriers. These entitlements provide the fundamental economic rationale for carriers to participate in the CRAF: they desire peacetime airlift business from DOD (37:20). "As a result, the MV Process directly influences the level of participation and composition of the CRAF" (19:vii).

In accordance with the previously discussed national and DOD policies, participation in the CRAF is a prerequisite to receiving peacetime airlift business

from DOD. Specifically, to be a CRAF partner, carriers have to commit 30 percent of their passenger fleet and/or 15 percent of their cargo fleets to the CRAF. To calculate these percentages, AMC puts all the carriers on even footing by translating the particular aircraft capabilities of each carrier into widebody equivalents (WBEs). As such, each carrier is evaluated on how much passenger and cargo capability it has in terms of a widebody aircraft (e.g., B-747-100). The points gained by the carriers for their committed aircraft also depend on "what stage and segment of the CRAF a carrier's aircraft is assigned to" (19:2).

An underlying purpose for the MV Process is to encourage carriers to commit more than the minimum required number of aircraft to the CRAF. If all carriers only committed the minimum amount of aircraft, the capability of the CRAF would be insufficient to meet DOD requirements. Hence, the program awards peacetime business opportunities in proportion to the carriers' CRAF commitments (19:1). Carriers who want to receive larger amounts of peacetime business from DOD are therefore financially encouraged to commit larger numbers of WBEs to the CRAF. This is the financial *hook* that keeps the carriers participating in the program, but keeping carriers involved in the CRAF is not as easy as one would think:

Like other segments of the private marketplace, the commercial transportation industry is downsizing, streamlining and eliminating excess capacity. Reduced commercial capacity, competing military and commercial priorities, and commercial market disruption during contingencies increasingly weigh into the total DTS lift equation (38).

Annually, DOD reevaluates the incentive process to find ways to encourage continued or increased carrier participation in the CRAF. One major example of an adjustment that DOD made to the process in Fiscal Year 1995, following a major decline in CRAF interest, was the inclusion of a CRAF participation evaluation factor with regard to the award of GSA City Pairs contracts. These contracts provide for passenger air transportation on scheduled service by carriers between two frequently traveled cities. As there are many frequently traveled routes by government employees, there are many different city pairs. Each city pair is associated with a negotiated fare the government pays for air travel. In general, these fares are lower than comparable fares available on the commercial market, and DOD customers are required to utilize these fares when traveling these routes. DOD now requires carriers who want to participate in this \$1 billion market to be members of the CRAF (39:2-5). This adjustment in evaluation factors helped restore interest and participation in the CRAF program.

Teaming Arrangements. Carriers can make teaming arrangements between themselves to take advantage of the pooled effect of MV points. One carrier may have an abundance of MV points but may have limited interest in certain segments of DOD's airlift requirements. Their teaming partner, however, may be interested in those segments but not have enough of an entitlement to qualify for business in that segment on their own. Together, they form a business relationship, allowing one carrier to receive some economic benefit from an entitlement that would otherwise go unused and allowing their teaming

partner to receive business it would not otherwise receive on its own. Today, this "trading of rights" is commonplace in the CRAF program (19:2).

Carrier Obligations. After the carriers' response to the solicitation and based on the calculation of the carriers' entitlements and teaming arrangements, AMC conducts negotiations with the carriers to determine the apportionment of the contracted airlift requirements. These contracts usually run concurrent with DOD's fiscal year, 1 October through 30 September, annually. Along with establishing the binding relationship between the government and the carriers for AMC's routine peacetime airlift augmentation business, these contracts also establish the carriers' legal obligations to the CRAF. Within these contracts, an attachment is dedicated solely to the CRAF program, outlining the basic policies, concepts, structure and processes, along with the carriers' operational requirements and obligations.

DOD requires CRAF carriers to maintain at least four complete crews of US citizens for each aircraft (40:22). An important concern is the fact that many Guard and Reserve military personnel also fly for the commercial airlines. During national airlift emergencies, these personnel are called to service by DOD to fly military aircraft. Because of this apparent conflict between military and commercial duties during national emergencies, DOD requires CRAF carriers to provide four full crews per aircraft free of Guard and Reserve military commitments (41:21).

Additionally, DOD requires carriers who wish to participate in the CRAF be DOD-approved and have at least one year of equivalent service in the

commercial sector prior to providing that service to the government. DOD requires this primarily to ensure the safe transportation of its personnel (16).

Note that although policy requires CRAF participation to receive government peacetime business, some carriers have aircraft too small to be eligible for CRAF program participation. In these cases, DOD issues carriers "a certificate of technical ineligibility so they can compete for government airlift business" (13).

Organization of the CRAF.

The CRAF program is divided into three basic segments: International, National, and Aeromedical Evacuation. To be eligible for participation in a particular segment, carriers' aircraft must meet certain prerequisite capability minimums. The International segment is divided into the long-range section and the short-range section, and each of these sections have passenger and cargo requirements. The National segment is divided into the Alaskan and domestic sections, each with passenger and cargo requirements. The Aeromedical Evacuation segment deals exclusively with worldwide air ambulance requirements.

The long-range international section is the largest section in terms of contract dollar values. Global passenger or cargo airlift requirements outside of the CONUS and Alaska are included in this section. This includes the Patriot Express missions, which provide passenger airlift to and from the CONUS to and from the larger DOD installations around the globe. Also included are the cargo missions that service and supply DOD via AMC's fixed en route system. Carriers

participating in this section "must maintain minimum long-range international fleet commitment levels (30 percent for passenger and 15 percent for cargo). Aircraft committed must be U.S.-registered aircraft capable of overwater operations, at least 3,500 nautical mile range and 10 hours per day utilization rate" (13).

The short-range international section serves domestic and near-shore international operations. Within this section, AMC has both passenger and cargo requirements. Carriers participating in this section are not required to have quite the global range capabilities as the long-range section requires. Aircraft participating in this section "must be capable of overwater operations and at least a 1,500 nautical mile range" (13).

The National segment consists of passenger and cargo flight operations in the CONUS and Alaska. Due to the unique operating environment in Alaska, DOD has separated these requirements into their own section. Alaskan operations have their own operating requirements and contract oversight process and provide airlift within U.S. Pacific Command's theater. The aircraft in the National section will be utilized for increased domestic airlift requirements within the US during an airlift emergency and "must be capable of carrying 75 passengers or 32,000 pounds (14,515 kilograms) of cargo" (13).

The aeromedical evacuation (AE) segment consists of aircraft capable of returning ambulatory passengers from a theater of operations to the CONUS. These aircraft are B-767 extended range aircraft which are converted after activation by the installation of a specially designed aircraft kit consisting of litters, stanchions, and medical equipment (13). These kits allow for 87 litter

patients per aircraft and accommodate 20 to 40 ambulatory patients (42:21).

Currently, defense contractor Raytheon maintains these kits in Greenville, Texas, and also installs the kits within 12 hours of aircraft delivery by the participating AE carriers. After CRAF activation, carriers have 48 hours to deliver the aircraft to Texas for kit installation (42:26). These AE aircraft are critical to the DOD.

Not only do they free military aircraft to perform crucial cargo delivery, they evacuate critical casualties and return medical supplies and crews back to the theater of operations. AE capability is found only in Stage II and Stage III of the CRAF (16).

The various segments and sections of the CRAF and a listing of the participating carriers are provided in Table 1 below (16):

Table 1: CRAF Carriers (as of March 2001)

International		National		Aeromedical Evacuation
Long-Range	Short-Range	Domestic	Alaskan	
Air Transport Int'l American American Trans Atlas Continental Delta DHL Airways Emery Worldwide Evergreen Federal Express Gemini Hawaiian North American Northwest Omni Polar Air TWA United United Parcel Service World	Alaska American Trans DHL Airways Lynden Air Miami Air North American Spirit	America West Midwest Express Southwest	Lynden Air Northern Air Reeve Aleutian	Delta TWA US Airways

Activation Stages of the CRAF.

DOD can activate the various segments that compose the CRAF in increments to provide the right amount of airlift for the task at hand. The CRAF program is divided into three stages of increasing airlift capability. Generally speaking, Stage I is designed to cover the airlift requirements for a regional crisis, Stage II provides sufficient airlift for a major theater war, and Stage III ensures enough airlift capability for what would be deemed national mobilization, such as during a multiple theater war scenario.

Once approved by the Secretary of Defense, USCINCTRANS has the authority to activate any or all of the stages. These "three stages of incremental activation allow USCINCTRANS to tailor an airlift force suitable for the contingency at hand" (40:22). Once activated, the carriers have "24 to 48 hours after the mission is assigned by AMC" to have their aircraft ready for a CRAF mission (40:22). This quick call-up capability also helps make incremental activation possible.

During the annual solicitation phase, when carriers designate which aircraft they are committing to the CRAF, they also have to specifically designate a stage for each aircraft. DOD manages the CRAF program in the macro-sense by ensuring the airlift capability required for each level of national emergency is available in the progressive amounts needed from Stage I to Stage III of the CRAF. Requirements levied by the Joint Staff during the Mobility Requirements Study-Bottom Up Review Update (MRS BURU) identified total requirements for 135 WBE passenger aircraft, 120 WBE cargo aircraft, and 40 AE aircraft for the

three stages combined. The CRAF program seeks to match capability with these requirements (43:3). "The national defense airlift objective is to ensure that military and civil airlift resources will be able to meet defense mobilization and deployment requirements in support of US defense and foreign policies" (21). Listed below in Table 2 are the numbers of aircraft currently committed to the CRAF in the various segments (16):

Table 2: CRAF Commitments by Stage (as of October 2000)

			Stage I	Stage II	Stage III
International	Long-range	Passenger	45	132	388
		Cargo	32	80	201
	Short-range	Passenger	0	12	79
		Cargo	0	4	4
National	Domestic	Passenger	0	0	68
		Cargo	0	0	0
	Alaskan	Passenger	0	0	0
		Cargo	0	6	6
Aeromedical Evacuation			0	25	57
Total			77	259	803

Although the CRAF is activated in stages, DOD will actually tailor the activation within each stage as required. In other words, just because DOD activates Stage I of the CRAF does not mean that every aircraft the carriers committed to Stage I will be activated and used. AMC can call up individual aircraft as required to meet the level of effort desired for the operation at hand. Activation of the CRAF has serious operational and financial impacts upon the carriers (44:7-10). As such, DOD is careful to only activate the minimum amount of commercial airlift demanded for national defense.

Retired Lt Gen Malcolm B. Armstrong, Delta Air Lines Executive Vice President for Operations, stressed that Delta "will be there for the nation" but cautioned that the CRAF exists for national emergencies. Activating the CRAF costs millions and could potentially cost Delta billions in lost revenue and market share (35:59-60).

Persian Gulf War Activation.

DOD has only activated the CRAF one time since its inception in 1952. In response to the need for the massive troop buildup as required by Operation Desert Shield, USCINCTrans General H. T. Johnson activated Stage I of the CRAF on 18 August 1990 (45:xi). Later on 17 January 1991, DOD activated Stage II in preparation for offensive actions (46:2). By the end of the ensuing Operation Desert Storm, using a mix of CRAF-activated and other volunteered aircraft, commercial carriers had provided 95 passenger and 63 cargo aircraft for DOD transportation requirements (47).

The strategic airlift to the Persian Gulf was the largest since World War II. By the cease-fire, Air Force airlifters had moved 482,000 passengers and 513,000 tons of cargo. Viewed in ton miles, the airlift of Operation Desert Shield/Storm was equivalent to repeating the Berlin Airlift -- a 56-week operation -- every six weeks (47).

Operation Desert Shield/Storm would not have been the success story it was had it not been for commercial airlift augmentation and the CRAF program. Certainly, as espoused by USTRANSCOM's posture statement, commercial airlift is a vital part of DOD's mobility force structure, providing almost 50 percent of DOD's airlift capability (38). This point was driven home when nearly two-thirds of the passengers in the deployment phase and 87 percent in the redeployment phase were moved by commercial air (48). The cargo numbers were equally impressive: commercial airlift carried roughly 27 percent of the airlift cargo deployed and 40 percent of the redeployed airlift cargo (43:4). Despite the massive airlift, DOD did not have to resort to activating Stage III, but rather relied

on Stage I and II and other volunteered aircraft. CRAF Stage III has never been activated.

Another interesting figure to note is that although commercial aircraft carried the majority of the passengers and a large percentage of the cargo, overall commercial carriers only accounted for 20 percent of all airlift missions (49:1). This percentage translated to the commercial carriers performing 5,556 missions during the war (16). This speaks highly of the high-capacity airlift capability of the commercial carriers and, resultantly, speaks highly of DOD's CRAF program. Although not without problems, the activation of the CRAF was an overwhelming success during the Persian Gulf War (50:17).

V. Commercial Airlift Augmentation Management

Introduction.

The management process that provides guidance and oversight of DOD's commercial airlift augmentation program is vitally important to the success of the DTS. The commercial air transportation industry is characterized by a highly complex, rapidly changing, and economically fragile environment. In such an environment, the management process becomes a critical part of the equation for success. Too much oversight results in economic frustrations for the carriers, and too little oversight results in strategic shortfalls for the DOD. Striking a balance and finding that right level of oversight is the goal.

DOD is a unique customer for the commercial air transportation industry and requires a specialized management program. No other customers have national defense responsibilities. No other customers carry such massive loads of military equipment to worldwide locations. No other customers are the armed men and women of the nation's military forces, and no other customers are their family members who transplant their homes and livelihoods to foreign locations on a regular basis. Perhaps most importantly, no other customers are mandated by law to use certain carriers. As such, DOD's management of its commercial airlift program is notably different than that of other customers of the airlines (51).

DOD's management process is designed to ensure the "highest possible standards of quality and safety" for all commercial airlift procurements (27:2). This process is built upon a layered approach involving many different levels of DOD management. This chapter focuses primarily on AMC's day-to-day

management teams who ensure the smooth integration of commercial airlift into the DTS on a daily basis. By far, management of peacetime airlift augmentation occupies most of the time of the majority of personnel involved in the process. But as the CRAF is obviously important to DOD's overall transportation responsibilities, this chapter begins by discussing those organizations that provide senior policy guidance and oversight for the *entire* commercial airlift augmentation program, as well as highlighting the roles and responsibilities of those DOD organizations specifically focused on the management of the CRAF.

Assistant Deputy Under Secretary of Defense (Transportation Policy).

The Assistant Deputy Under Secretary of Defense (Transportation Policy) (ADUSD(TP)) plays an important role in establishing policies and providing guidance for issues involving the use of commercial transportation resources by DOD. Serving as part of the Office of the Deputy Under Secretary for Acquisition, Technology and Logistics (USD(AT&L)), this office is DOD's principal advisor for transportation issues. A fundamental task for ADUSD(TP) is the development, analysis, and advisement of policy to ensure that DOD complies with transportation policies and national security objectives. The office serves as the "primary focal point and principal DOD spokesman for transportation issues" (52).

With regard to the CRAF and DOD's peacetime airlift augmentation programs, ADUSD(TP) promotes "coordination, cooperation, and mutual understanding between the DOD and the commercial transportation industry for transportation issues of mutual interest" (52). ADUSD(TP) serves as DOD's

senior level of management for the commercial airlift augmentation program and is highly engaged in the championing of DOD's unique transportation requirements with other governmental agencies (16).

Of particular interest, ADUSD(TP) is primarily responsible for the requirements of DOD Directive 4500.53, "DOD Commercial Air Transportation Quality and Safety Review Program." This directive establishes a quality control program to manage DOD's use of commercial passenger airlift, with USD(AT&L) providing senior oversight. In descending order of authority, the major tiers discussed in the directive are the DOD Commercial Airlift Review Authority (CARA); USCINCTrans; the Commander, AMC; the DOD Commercial Airlift Review Board (CARB); and the DOD Air Carrier Survey and Analysis Office (27:6-9). These organizations are discussed in more detail in the following sections.

DOD Commercial Airlift Review Authority.

The CARA serves as an advisory body to DOD's senior leaders for issues regarding passenger airlift augmentation by commercial carriers. The CARA also serves as the final stop for safety issues that are sent up the management chain for decisions. As such, the CARA makes the necessary decisions (by majority vote) when the Commander, AMC, forwards issues to them. The CARA also has waiver authority for the provisions of DOD Directive 4500.53 as necessary during emergency situations. Members of the CARA are listed in Table 3 (27:15).

Table 3: Composition of the DOD Commercial Airlift Review Authority

Deputy Under Secretary of Defense for Logistics	Chair
Deputy Assistant Secretary of Defense for Personnel Support, Families, Education	Member
Director for Logistics, Joint Staff (J-4)	Member
Deputy Chief of Staff for Logistics, U.S. Army	Member
Deputy Chief of Naval Operations for Logistics, U.S. Navy	Member
Deputy Chief of Staff for Installations and Logistics, U.S. Air Force	Member
Deputy Chief of Staff for Installations and Logistics, U.S. Marine Corps	Member
Deputy Commander in Chief, USTRANSCOM	Member
Assistant Deputy Under Secretary of Defense for Transportation Policy	Member
Office of the Assistant Deputy Under Secretary of Defense for Transportation Policy	Secretariat

The Commander in Chief, U.S. Transportation Command.

DOD Directive 4500.53 charges USCINCTRANS with management and execution responsibilities for ensuring the safety and quality of DOD's commercial air passenger transportation services. As the second management tier in DOD's quality control program, USCINCTRANS (currently dual-hatted as the Commander, AMC) appoints individuals to the CARB and makes decisions as necessary based on the information and guidance provided to him by the DOD CARB. USCINCTRANS may also refer issues to the USD(AT&L) for resolution or policy decisions, as necessary (27:6).

The Commander, Air Mobility Command.

DOD Directive 4500.53 charges AMC's commander with establishing the DOD Air Carrier Survey and Analysis Office. As the third management tier in DOD's quality control program, the Commander, AMC, is responsible for developing, coordinating, and implementing procedures used to conduct safety inspections of DOD's air carriers. The Commander, AMC, is also responsible for establishing DOD-unique quality and safety standards and for developing

"uniform procedures" for taking actions against carriers who violate applicable safety standards and requirements (27:6).

DOD Commercial Airlift Review Board.

The CARB is DOD's primary decision-making organization for determining which carriers are allowed to be utilized by the DOD in the commercial airlift augmentation program with regard to quality and safety. 10 USC 2640 provides the authority for the CARB, and 32 CFR 861 outlines the procedures and standards the CARB follows in determining air carrier worthiness. In general, the CARB monitors incidents, trends, and other factors affecting air passenger safety and quality to ensure the overall safety of DOD's use of commercial passenger airlift service (27:6-7). 32 CFR 861 requires all safety or airworthiness issues to be referred to the CARB.

The composition of the CARB is outlined in both 32 CFR 861 and DODD 4500.53. The CARB is composed of four representatives (general/flag officers or Senior Executive Service members) from USTRANSCOM, and its component commands. The senior AMC representative, HQ AMC's Director of Operations, currently chairs the CARB. If the CARB is unable to reach a decision on its own, the issue is forwarded to USCINCTrans for his action and decision (27:7).

Based on recommendations from the DOD Air Carrier Survey and Analysis office, the CARB makes the initial decision to allow or deny a carrier to enter the program and then makes all later decisions as to whether a carrier is allowed to continue providing air transportation services in the program (53:6). For carriers failing to meet either Federal Aviation Administration (FAA) or DOD

quality and safety standards, the CARB has the ability to authorize their temporary nonuse or suspension. DOD Directive 4500.53 also instructs the CARB to convene following "any fatal accident or other serious incident" to take precautionary actions, as required (27:7).

Following fatal accidents, the CARB is required to make "an immediate decision or recommendation" whether to place the carrier involved in the accident in a temporary nonuse status. These decisions are usually made with the advice of the DOD Commercial Airlift Review Authority. Generally, temporary nonuse status will not extend beyond 30 days. This action is only designed to exclude the carrier from being allowed to participate in any other DOD flight activities pending a suspension decision by the CARB (26).

Once adequate information has been collected to allow an informed decision, the CARB will consider the data gathered by the DOD Air Carrier Survey and Analysis Directorate and the data provided by the carrier in question. The burden of proof is on the carrier to show "their suitability to safely perform DOD airlift services by clear and convincing evidence." The CARB has the authority to suspend the carrier if evidence warrants or to "impose a lesser sanction" if appropriate. If a carrier is placed in suspension by the CARB, the carrier can appeal the decision to USCINCTrans (26).

DOD Air Carrier Survey and Analysis Office.

The DOD Air Carrier Survey and Analysis office is responsible for conducting surveys of the commercial carriers performing airlift services for the DOD. Specifically, AMC's DOD Air Carrier Analysis Division (HQ AMC/DOB)

serves in this role for DOD. Experienced survey teams perform on-site surveys of the various carriers, including observations of aircrew performance in the cockpit, inspections of maintenance activities, and review of general management procedures throughout the carriers' operations (26). In addition to the applicable Civil Aviation Agency Regulations and contract requirements, survey teams from DOB follow the requirements of 32 CFR 861 in providing continuous analysis of carriers participating in DOD's commercial airlift augmentation program (53:6).

DOB is the primary link between the DOD and other governmental agencies concerned with the safety and airworthiness of carriers. Other such agencies include the DOT, the FAA, and the National Transportation Safety Board. DOB is the central collection office for safety evaluation data and analysis and is charged with determining how to measure compliance. Using a compilation of data points from financial, operational, maintenance, safety, and airworthiness observations, DOB provides guidance and advice for the higher tiers of DOD's quality and safety program discussed in the previous sections of this chapter. As warranted by incidents and trends, DOB refers matters to the CARB and other organizations/agencies, as required, for their consideration. DOB serves as the principal advisor and action office for the CARB and responds to their requests for information and data, as necessary (27:57-8).

United States Transportation Command.

USTRANSCOM provides the peacetime and wartime transportation for the DOD via air, land, and sea. As such, USCINCTRANS has combatant command

of AMC, MTMC, and MSC. This includes the combatant command of all DOD's transportation assets, "except for Service-unique or theater-assigned transportation assets." In his role as DOD's single manager for transportation, USCINTRANS is charged with fostering and maintaining the necessary relationships with DOD's commercial transportation partners.

[US]CINTRANS shall establish and maintain relationships between the Department of Defense and the commercial transportation industry to develop concepts, requirements, and procedures for the Contingency Response Program, the Civil Reserve Air Fleet, and the Sealift Readiness program. Any procedures so developed shall take effect upon their approval by the Secretary of Defense.

As previously discussed, USCINTRANS has the delegated authority to activate and command the CRAF, with the Secretary of Defense's approval (54).

Headquarters Air Mobility Command.

DOD Directive 4500.53 prescribes AMC's responsibility for establishing safety standards and evaluation criteria for DOD's commercial airlift augmentation program. Primarily AMC does this through the DOD Air Carrier Survey and Analysis Office (HQ AMC/DOB) as discussed previously in this chapter. However, many other actions are required within the AMC staff, beyond DOB's procedures, to make DOD's commercial airlift augmentation program functional. From the basic contracting of the airlift services to the development of policy and procedures, many other aspects of the program have to be managed and controlled. Most of the primary organizations who participate in this process are within HQ AMC's Operations Directorate (HQ AMC/DO), but several of the other directorates within HQ AMC have responsibilities for the commercial airlift augmentation program as well. The following sections discuss the various

organizations within HQ AMC that help make the program successful in both peacetime and wartime.

Headquarters AMC, Contract Airlift Division (HQ AMC/DOY). DOY has the basic responsibility of soliciting, negotiating, awarding, and administering the contracts for international and domestic commercial airlift services for DOD. DOY is divided into three branches: the Contract Airlift Procurement Branch (DOYA), the Contract Airlift Management Branch (DOYM), and the Specialized Airlift and Services Branch (DOYR) (55).

Headquarters AMC, Airlift Procurement Branch (HQ AMC/DOYA). DOYA is responsible for the solicitation, negotiation, and award of commercial airlift and related services. Within DOYA, these duties are divided up among three sections: the International Airlift Section (DOYAI), the Airlift Expansion Section (DOYAB), and the Support Airlift Section (DOYAS).

DOYAI is responsible primarily for the contracting of the international *fixed buy*, which is the annual procurement of routine, schedulable airlift in both plane load passenger/cargo charters and in partial plane loads (full pallets or less than full pallets) on regular commercial schedule service flights. As discussed, the awards made to the carriers for the fixed buy are mostly dependent upon the carriers' entitlements earned from their CRAF commitments. In these annual contracts, the rates are negotiated for the entire year. For Fiscal Year 2000, the fixed buy portion of AMC's commercial airlift program was valued at \$354 million (56). These contracts also contain provisions for the CRAF activation (*not to*

exceed line items determined at time of CRAF activation) and provisions for an estimated amount of *expansion* airlift (57).

In addition to the international fixed buy contracts, DOYAI is also responsible for establishing AMC's World Wide Express contracts, which are for worldwide door-to-door delivery of small packages (less than 150 lbs.) by commercial carriers via their commercial scheduled service. In Fiscal Year 2000, these contracts were valued at \$34 million. Also, DOYAI establishes the contracts for AMC's transportation of perishables (fresh fruits and vegetables) to overseas military installations in South Korea, Japan, and Guam via commercial scheduled service. These contracts were valued at \$13 million in Fiscal Year 2000. The World Wide Express and perishables contracts are awarded based on price and service rather than entitlements (56).

DOYAB is responsible primarily for the contracting of the international and domestic expansion airlift, which refers to those channel, exercise, and special assignment airlift missions which are "over and above that initially awarded" under the fixed buy contracts (55). Typically, these are ad hoc requirements that come to AMC with less than 30 days notice by the requesting agency. The international expansion awards to the carriers are based upon the carriers' earned entitlements and priced under the negotiated rates established in the fixed buy contract. Domestic expansion awards are made under the terms of a *master solicitation* and via an electronic bid system. Domestic expansion awards are made based on price, service, and availability rather than entitlements. In Fiscal Year 2000, DOYAB awarded international domestic expansion contracts

valued at \$278 million and domestic expansion contracts valued at \$66 million (56).

DOYAS is responsible primarily for the contracting of domestic commercial airlift services and CRAF support with carriers who would be otherwise too small to participate in the CRAF program. In addition to small domestic carriers, DOYAS contracts with other small carriers for airlift support in Alaska, Canada (supporting the North American warning system), and international and other near-off-shore locations. These contracts are awarded based on price and service rather than entitlements. In Fiscal Year 2000, DOYAS awarded contracts valued at \$37 million (56).

Headquarters AMC, Specialized Airlift and Services Branch (HQ AMC/DOYR). DOYR is responsible for developing, planning, and implementing the procurement of AMC's specialized airlift services and classified contracts. Specifically with regard to the commercial airlift augmentation program, DOYR solicits, negotiates, and awards the contracts for commercial air terminal services to provide ground services to transiting aircraft, including commercial charter flights, at 24 worldwide locations. In addition to 17 smaller locations in South America and one location in American Samoa, DOYR also contracts for these services at Eielson AFB, AK; Misawa Air Base, Japan; Fukioka, Japan; Kunsan Air Base, South Korea; and Kimhae Air Base, South Korea. These contracted air terminals provide critical service in addition to AMC's worldwide fixed en route base structure (58).

Another service of interest that DOYR contracts for is the Commercial Gateway services at the international airports of Baltimore, Charleston, Seattle, and Los Angeles. These contracts operate in congruence with the channel Category-B passenger charters that operate out of these airports carrying DOD passengers to worldwide locations on a regular basis. These services entail the ticketing and baggage handling for arriving and departing passengers at these commercial airports. Combined with the air terminal service contracts, these contracts are valued at \$3.1 million in Fiscal Year 2001 (58).

Another task handled by DOYR is contracting for special studies and analysis contracts, as required for AMC's commercial airlift program. One prominent such example is DOYR's recent contract that is for obtaining an independent assessment of the CRAF (the *CRAF Phase II Study*).

USTRANSCOM and AMC leadership will use this assessment to find ways to improve the CRAF and the commercial airlift augmentation program (58).

Headquarters AMC, Contract Airlift Management Branch (HQ AMC/DOYM). DOYM is responsible for enforcing contract provisions, monitoring contract performance, and maintaining contract administration over most of the airlift contracts established by DOYA. This involves reviewing the performance of the commercial carriers providing airlift services and "taking necessary action with respect to those carriers who fail to meet the minimum acceptable standards set forth in the contract" (53:11). As an important part of the administration process, DOYM handles all changes and problems to the airlift missions that have been awarded by DOYA. This involves constant hands-on management

and interaction with AMC users and the commercial carriers. To manage this process, DOYM is split into the Domestic Contract Administration Section (DOYMB) and the International Contract Management Section (DOYMA) (55).

DOYMB performs contract administration for domestic commercial airlift contracts, contracts for passenger and cargo movement within Alaska, and contracts awarded by DOYR for the baggage handling and passenger check-in services at AMC's international gateways. These responsibilities include oversight of the contracts for passenger movement on scheduled service flights via the Military Air Transportation Agreement (55).

Many of DOYMB's contract administration responsibilities are the same as those of DOYMA, which are discussed in the following paragraphs, but one unique administration task DOYMB has is the administration of the Military Bus Agreement. For some domestic passenger air movements, MTMC awards bus contracts for the movement of the passengers from their installation to the airport where the carrier is operating. In cases of delays or any other changes in the schedule of the air mission, DOYMB is responsible for making the schedule changes with the bus contractors and ensuring the bus service meets the changed requirements of the mission (59).

DOYMA performs contract administration for all international commercial airlift missions. Basically, contract administration is ensuring contract compliance by the contractor and the government. Not only does it entail ensuring compliance with the *black and white* requirements of the contract, contract administration also entails the management of *gray* areas of the contract and

changes brought about due to the dynamic environment in which the contract operates. Particularly in the airlift business, missions are delayed and changes in operating requirements happen quite often. Contract administration of airlift contracts is specialized and requires a certain amount of learned expertise by the contract administrators in order for the airlift system to flow effectively.

Two primary indicators of mission effectiveness that are managed by DOYMA include the contractor schedule reliability program and the in-flight inspection (Range Ride) program. Both of these programs are related to safety, as each of the metrics used in the evaluation of these programs are indicative of the quality and safety standards of the carriers involved in the commercial airlift augmentation program.

The schedule reliability program evaluates how often a particular carrier's missions are delayed due to the fault of the carrier. In general, carriers are required to have a minimum schedule reliability rate of 85 percent. This reliability rate is determined on a rolling three-month average and is calculated by individual carriers and also carrier teaming arrangements. Should a carrier or teaming arrangement fall below the 85 percent level, DOYM can take a variety of actions to encourage the carrier to improve their performance including withholding of expansion business or, ultimately, the termination of the contract. Carriers are also offered an incentive to receive additional expansion business over and above their entitlements if they meet a high-level of schedule reliability (59).

The Range Ride program is used to determine the in-flight compliance of carriers with the contract requirements. For this program, Contract Administrators (CAs) and Quality Assurance Evaluators (QAEs) ride as a passenger on the chartered Category-B passenger missions and evaluate the service provided by the cabin crew and the overall physical maintenance of the aircraft interior. If discrepancies are found, these can be brought to the attention of the cabin crew, if warranted, or simply documented. In either case, the results of the Range Ride are documented and forwarded to the carrier for their response and corrective action, if required. In general, carriers are required to have a discrepancy rate of less than 5 percent based on all the segments flown by their aircraft. Obviously, CAs and QAEs cannot Range Ride every contracted flight; however, they do try to maintain a balanced program that covers the majority of carriers and routes flown on a regular basis. As with the schedule reliability program, AMC can take punitive actions against a carrier should their discrepancy rate go above the minimum standard (59).

The schedule reliability and the in-flight inspection programs are critical to ensuring the safe transportation of DOD passengers. Both of these programs give some indication as to the overall performance of the carriers from a safety viewpoint. If a carrier's departure reliability is consistently low, it may be reflective of an underlying maintenance or safety problem that requires corrective action. If a carrier is *cutting corners* on in-flight service or if the cabin of an aircraft is improperly maintained, these may also be indicators of underlying

financial or safety problems. These preliminary indicators help AMC ensure the safety of the DOD's commercial airlift augmentation program.

Operating Locations F and G, Air Mobility Command Airlift Operations Squadron (OL-F/AMCAOS and OL-G/AMCAOS). To assist DOYM with their contract administration responsibilities, HQ AMC has field Administrative Contracting Officers (ACOs) and CAs at two strategic locations: McGuire AFB, NJ (OL-G); and Travis AFB, CA (OL-F). These two OLs handle the majority of contract administration duties for airlift missions once they are within 24 hours of their operating schedule and until the completion of the mission. In general, OL-G is responsible for airlift missions operating east of the Mississippi River to the east coast of Africa, and OL-F is responsible for airlift missions operating west of the Mississippi River to the east coast of Africa (59).

To handle these wide areas of geographical responsibility, the OLs each have field CAs located at strategic points within their area of responsibility. OL-G has CAs located at Ramstein Air Base, Germany; and OL-F has CAs located at Elmendorf AFB, AK; and Yokota Air Base, Japan. With the exception of the CA at Elmendorf who is a civilian employee, the field CAs are military personnel. (This is notable because, with the exception of reserve military augmentees, all of the HQ AMC's contracting personnel, including the OLs, are civilian employees.) These field CAs provide crucial interface between the military users in the operating theaters and the CONUS-located contracting staff. These CAs are largely responsible for performing the required Range Rides and conducting station visits to air terminals where commercial airlift augmentation missions

operate out of on a regular basis. These checks and visits help ensure the theater-specific concerns of customers are met by AMC in the contracting process and help to preclude unauthorized contract actions by carrier and government personnel (59).

Also, these field CAs help resolve problems during mission delays and act as an important information relay. Attributing the fault of delays to carriers is a contentious business since it has an economic effect upon the carriers. The military and contractor personnel providing air terminal services at military installations also do not like being held responsible for delaying airlift missions. As such, field CAs help to provide an objective opinion in helping the contracting officers at the OLs and AMC to sort out the details during complicated delay situations. During many delay situations, because of their fielded locations, the CAs have the ability to be on-site to help ensure contractor compliance with passenger care requirements. Having a CA within easy reach of a crisis or situation is a big asset for DOD's commercial airlift augmentation program (60).

Headquarters AMC, Special Assistant for Civil Air (HQ AMC/DOF). DOF serves as AMC's lead agent for developing concepts, operating policies, and plans to manage the CRAF and other aspects of the commercial airlift augmentation program. DOF determines whether or not carriers' aircraft are acceptable for CRAF participation and calculates the mobilization value points for carriers to determine carriers' shares of peacetime business opportunities (53:6).

Primarily, DOF is responsible for developing policy that ensures carrier participation in the CRAF. They serve as a critical interface between the DOD

agencies requiring commercial airlift services and the process of contracting for the airlift. On a continual basis, DOF evaluates the effect of the incentives AMC offers carriers in return for participating in the CRAF to determine what changes, if any, are required to encourage CRAF participation (16). One such change to further encourage carriers to participate in the CRAF was the 1995 legislation which allows CRAF participants commercial access to military airfields for non-DOD operations (61).

During national airlift emergencies requiring the activation of the CRAF, DOF is the office responsible for actually communicating with the carriers and executing the activation messages. The first messages issued detail to the carriers DOD's intent to exercise its contractual rights and give advance warning to the carriers of the anticipated aircraft call-up requirements. As aircraft are actually required, DOF communicates with the carriers as to exactly which aircraft are required (by tail number). During activation, DOF heads up the civil air cell that is responsible for providing management and oversight of all commercial airlift augmentation activities in conjunction with the TACC. Along with contracting personnel, augmentees from the various carriers involved in the CRAF activation help AMC control the activation process and the resulting operational airlift missions (16).

Headquarters AMC, Tanker/Airlift Control Center (TACC). TACC manages the commercial airlift missions operated by AMC-chartered carriers much like they monitor AMC's organic airlift missions. Once the missions have been contracted, TACC's action officers establish operating schedules with the

carriers and then pass the schedule information on to the contracting personnel and the field operating agencies affected by the missions (53:7). For some diplomatically sensitive nations, TACC will assist the carriers with obtaining diplomatic clearances; otherwise, carriers are responsible for obtaining all permits and permissions to operate their missions (53:28-29)

TACC follows these contract airlift missions in the same manner as the organic missions, keeping track of aircraft arrival and departure information for each station visited by the mission (53:22). As mission changes are required, TACC works closely with the contracting personnel at Travis AFB, CA and McGuire AFB, NJ to manage any required changes to the previously awarded schedule or to sort out any problems encountered by the mission (60).

Headquarters AMC, Aerial Port Operations Division (HQ AMC/DON). As the primary agency requesting contract airlift services, DON is responsible for establishing a Quality Assurance Surveillance Plan (QASP) to define QAE responsibilities and surveillance requirements. The QASP is a critical part of DOD's overall Commercial Airlift Evaluation Program (CAEP) that helps ensure that the government receives the services for which it contracts (53:31).

Located at most stations where DOD chartered airlift operates out of, QAEs are DOD's first line of defense for ensuring the government only pays for services rendered. Where they are located, QAEs are required to inspect 100 percent of commercial passenger missions and 50 percent of commercial cargo missions. Also, QAEs are generally responsible for coordinating the interaction between government and carrier personnel and for controlling the operations in

and around commercial aircraft at military airfields (53:32). Through the position of the HQ AMC Command QAE, DON is responsible for "developing policies and procedures in conjunction with the ACO to provide required guidance and support to field QAEs" (53:10).

Other Interested Parties Within AMC. The previously discussed organizations within AMC provide the primary oversight and interaction with the commercial airlift augmentation program. However, as with the organic airlift process, many other offices within HQ AMC and throughout AMC's aerial port system are involved in some form or fashion with the commercial airlift augmentation program: public health personnel are responsible for food services sanitation standards enforcement, maintenance personnel are responsible for coordinating with and assisting the commercial carriers' maintenance requirements, commanders at locations where commercial airlift missions are operating out of have an overall responsibility for ensuring contract required government services are provided to the carriers, etc. Many DOD personnel are involved in the process. The bottom line requires that DOD integrates commercial airlift into its day-to-day operations.

VI. Summary

The Importance of Commercial Airlift.

The commercial airlift augmentation program is a vital factor in the overall success or failure of the DTS. DOD personnel must understand how the program is managed by DOD, learn how to work with the commercial carriers, and treat them as an integral part of the DOD airlift team. During national airlift emergencies, the CRAF may be responsible for almost all of DOD's passenger lift and over a third of DOD's cargo lift. As demonstrated during the Persian Gulf War, the DOD is dependent upon the capability of the CRAF during a major theater war scenario.

And, equally critical, the DOD is dependent upon the day-to-day airlift support by commercial carriers during peacetime. Their support of worldwide passenger and cargo movements keeps the DTS alive and well. It is this peacetime cooperation that makes the wartime synchronization possible between DOD's organic airlift capability and that of DOD's commercial airlift partners.

The Defense Transportation System.

The DTS is the transportation infrastructure that supports the DOD. USTRANSCOM's three Component Commands--MSC, MTMC, and AMC--form the execution backbone of the DTS. MSC is the USN's component command of USTRANSCOM, providing sealift transportation services between worldwide seaports for DOD forces and providing key prepositioning of forward-based combat support. MTMC is the USA's component command of USTRANSCOM, providing ocean terminal, commercial ocean liner service, and traffic

management worldwide for DOD forces. AMC is the USAF's component command of USTRANSCOM, providing airlift, air refueling, and aeromedical evacuation services worldwide for DOD forces. AMC moves cargo and passengers by using a mix of commercial and military aircraft, and DOD's logistics system relies heavily upon commercial carriers for worldwide transportation services. With regard to commercial airlift augmentation, AMC has management responsibility for the majority of issues and concerns. Even during peacetime, the DOD utilizes commercial airlift for a large portion of its transportation requirements.

The Military and Commercial Airlift Relationship.

DOD utilizes commercial airlift extensively during peacetime. In general, commercial carriers have to participate in the CRAF program to receive peacetime business from DOD. The CRAF and the peacetime use of commercial air carriers originated from DOD's inability to effectively mobilize on a national basis using only organic airlift. With national mobilization being an important issue leading up to the Cold War, the CRAF was created in 1952 via a formal agreement whereby commercial carriers volunteer their aircraft for use during national airlift emergencies in return for peacetime business from DOD.

This use of commercial airlift during peacetime is in congruence with the US National Airlift Policy, which acknowledges the strategic importance of airlift to the nation's defense in light of DOD's shortfall of organic airlift. The policy establishes that it is in the nation's best interest to have a minimally sized and operated organic air fleet to meet military-unique requirements, augmented by an

equally important commercial air fleet to meet all other requirements. This relationship between military and commercial airlift is echoed in the DOD's transportation policies. Along with utilizing commercial carriers to the maximum extent possible, DOD is also responsible for ensuring the highest level of safety of its passengers being transported via commercial airlift. Title 32 of the Code of Federal Regulations, Part 861; DOD Directive Number 4500.53; and DOD Directive Number 4500.9 outline the key requirements of DOD's safety programs.

A trend in the commercial airline industry is the growing international alliances between airlines worldwide. As US carriers are financially obligated to follow the lead of the international marketplace, the concept of too much foreign control becomes an increasing concern for the DOD. As foreign control and international cooperation continues to increase, the independence of US carriers will diminish and may have a negative impact upon the ability of DOD to freely call up US carriers during national airlift emergencies.

The Civil Reserve Air Fleet.

Although voluntary in nature, the CRAF program consists of contractual agreements between US air carriers and the government. This arrangement requires very little up-front government investment while keeping a large amount of airlift capability available for the DOD's use. The program is largely successful because of the peacetime integration of commercial airlift into the DTS. Based on a five-year MOU between AMC and the carriers, AMC annually contracts for peacetime airlift services with carriers in proportion to their

aircraft commitments to the CRAF program using a Mobilization Value (MV) point system. These contracts establish the carriers' legal obligations to the CRAF.

To be a CRAF partner, carriers have to commit 30 percent of their passenger fleets and/or 15 percent of their cargo fleets to the CRAF, and DOD requires CRAF carriers to maintain at least four complete crews of US citizens for each aircraft (b42:22). Carriers can make teaming arrangements between themselves to take advantage of the pooled effect of MV points.

The CRAF program is divided into three basic segments: International, National, and Aeromedical Evacuation. The CRAF program is further divided into three stages of increasing airlift capability. Stage I is designed to cover the airlift requirements for a regional crisis, Stage II provides sufficient airlift for a major theater war, and Stage III ensures enough airlift capability for what would be deemed national mobilization, such as during a multiple theater war scenario.

Once approved by the Secretary of Defense, USCINCTRANS has the authority to activate any or all of the stages. Activation of the CRAF has serious operational and financial impacts upon the carriers, and DOD is careful to incrementally activate the minimum amount of commercial airlift demanded for national defense. As shown in its first and only activation during the Persian Gulf War, the CRAF program is successful and provides critical mobilization capability to the DOD.

The Commercial Airlift Augmentation Management Process.

DOD's management process is built upon a layered approach with many different levels of DOD management involved in the process and is focused upon

safety and quality. At the most senior level within the DOD, the Under Secretary of Defense for Acquisition, Technology and Logistics establishes policies, provides guidance for issues involving the use of commercial transportation resources by DOD, and serves as DOD's principal advisor for transportation issues through the Office of the Assistant Deputy Under Secretary of Defense (Transportation Policy). DOD Directive 4500.53 establishes a tiered quality control program to manage DOD's use of commercial passenger airlift, with USD(AT&L) providing senior oversight. These management tiers are the CARA; USCINCTrans; the Commander, AMC; the DOD CARB; and the DOD Air Carrier Survey and Analysis Office.

The CARA serves as an advisory body to DOD's senior leaders for issues regarding to passenger airlift augmentation by commercial carriers and serves as the final stop for safety issues that are sent up the management chain for decisions. The second management tier is composed of USCINCTrans with execution responsibilities for ensuring the safety and quality of DOD's commercial air passenger transportation services. USCINCTrans makes decisions as necessary based on the information and guidance provided to him by the lower management tiers and is responsible for establishing the CARB. The Commander, AMC, is responsible for establishing inspection procedures and for establishing the DOD Air Carrier Survey and Analysis Office. The CARB is DOD's primary decision-making organization for determining which carriers will be utilized by the DOD with regard to quality and safety. The CARB is composed of four representatives from USTRANSCOM and its components; and is currently

chaired by the senior AMC representative. The DOD Air Carrier Survey and Analysis office is responsible for conducting on-site surveys of the commercial carriers performing airlift services for the DOD. These surveys include observations of aircrew performance in the cockpit, inspections of maintenance activities, and review of general management procedures throughout the carriers' operations. This office is the primary link between the DOD and other governmental agencies concerned with the safety and airworthiness of carriers.

As the air component of USTRANSCOM, AMC executes the majority of actions associated with DOD's commercial airlift augmentation program. HQ AMC/DOY has the basic responsibility of soliciting, negotiating, awarding, and administering the contracts for international and domestic commercial airlift services for DOD and is divided into three branches: the Contract Airlift Procurement Branch (DOYA), the Contract Airlift Management Branch (DOYM), and the Specialized Airlift and Services Branch (DOYR). In general, DOYA contracts for the airlift services, and DOYM administers the contracts through contracting officers and contract administrators located at HQ AMC and at strategic worldwide locations. DOYR is involved in contracting for air terminal and check-in/baggage handling services at several key locations throughout AMC's air terminal network.

HQ AMC/DOF serves as AMC's lead agent for developing concepts, operating policies, and plans to manage the CRAF and other aspects of the commercial airlift augmentation program. DOF determines whether carriers' aircraft are acceptable for CRAF participation and calculates the mobilization

value points for carriers to determine carriers' shares of peacetime business opportunities. DOF is responsible for developing policy that ensures carrier participation in the CRAF. During CRAF activation, DOF heads up the civil air cell that is responsible for providing management and oversight of all commercial airlift augmentation activities.

HQ AMC/DON is responsible for establishing a QASP to define QAE responsibilities and for training QAEs in their basic evaluation duties. QAEs are DOD's first line of defense for ensuring the government only pays for services rendered. QAEs are also responsible for coordinating the interaction between government and carrier personnel and for controlling the operations in and around commercial aircraft at military airfields. DON's Command QAE is responsible for senior policy development and oversight of AMC's field QAEs.

HQ AMC/TACC establishes schedules and monitors airlift missions operated by AMC-chartered carriers. As required, TACC will assist the carriers with obtaining diplomatic clearances. Further, many other AMC agencies are involved in the management process. DOD's commercial airlift augmentation program is integrated into the everyday activities of AMC. The program is successful because it is part of the normal activities of AMC during both peacetime and wartime. Should national mobilization be required, the CRAF stands ready to meet DOD's airlift challenge.

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14. ABSTRACT <p>The Defense Transportation System (DTS) relies heavily upon the commercial air transportation industry to meet transportation requirements beyond the Department of Defense's (DOD) organic airlift capability. The Civil Reserve Air Fleet (CRAF) is an integral part of the DTS that provides a strategic alliance between DOD and commercial air carriers. This alliance requires a deep level of commitment by the DOD and their commercial air carrier partners to make the contractual arrangements a success and to ensure the functionality of commercial airlift augmentation during times of national need.</p> <p>This research project explores the corporate structure involved in DOD's management of the commercial airlift augmentation program and outlines each organization's role and responsibilities. While making no overall recommendations regarding the management of the commercial airlift augmentation program, this paper provides a tool to increase the awareness of personnel involved in the mobility arena regarding DOD's use of commercial airlift during both wartime and peacetime and constructs a framework for logistics personnel to build upon for future airlift discussions. Particularly, this paper is geared toward military logistics professionals who need to better understand the integration of commercial airlift into the DTS.</p>					
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